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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,728

04/03/2006

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126539

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05/03/2007

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EXAMINER

PARVINI, PEGAH

ART UNIT

PAPER NUMBER

1755

MAIL DATE

DELIVERY MODE

05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/562,728

Applicant(s)

ZHANG ET AL.

Examiner

Pegah Parvini

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 15, 20 and 24 is/are rejected.
- 7) ☒ Claim(s) 12-14 and 16-19, and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20060403.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 23 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim 23 has not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

1. Claim 24 provides for the use of a composition of vitroceraamic type as defined in claim 1 in an infrared system operating in a wavelength range extending from 0.7 to 14  $\mu\text{m}$ , but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
2. Claim 24 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 102***

Art Unit: 1755

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11, 15, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,143,609 to Aitken et al.

3. Regarding claims 1-3, 7, 10, and 15, Aitken et al. disclose that chalcogenide glasses which exhibit excellent optical transparency near and far infrared spectral contain one or more elements of sulfur group such as S, Se, or Te, and they may be combined with arsenic, antimony, germanium, gallium, etc (column 6, lines 54-67; column 7, lines 1-11). Furthermore, the reference discloses that chalcogen elements may be mixed with a halide (fluorine, chlorine, bromine, iodine) to create chalco-halide glasses (column 6, lines 61-63). In addition, the reference teaches chalcogenide glasses which may have about 0-35% Ge, about 0-55% As, about 30-85% S (column 8, lines 25-33). Moreover, the reference discloses that in order to modify the optical, thermal, and mechanical properties of these glasses, elements such as gallium (Ga), selenium (Se), antimony (Sb), iodine (I) may be added as optical constituents; also, other elements such as the rare earths or Li, K, and Na may be included as well

(column 8, lines 25-33). Additionally, the reference disclose that halide glasses may contain compounds such as 20% NaF (column 10, lines 19-25).

It is noted that percentages are in mole percent.

With respect to the presence of gallium, Ln, and Adjuvant, it is considered that because the instant claims recite the language of "less than" in defining the amounts of these components or they claim zero as one possible amount of those elements, the fact that Aitken et al. do not specifically disclose an amount of the above mentioned components, namely Ga, Ln, and Adjuvant, is seen to read upon the ranges instantly claimed. In re Mochel, 176 U. S. P. Q. 194 (CCPA 1972).

4. Regarding claim 4, Aitken et al. disclose the germanium content to be from 0-35%.
5. Regarding claim 5, Aitken et al. disclose about 30-85% S (column 8, lines 25-33).
6. Regarding claim 6, Aitken et al. disclose an amount of about 0-55% As, arsenic.
7. Regarding claims 8-9, Aitken et al. do not disclose any rare earth metal which seems to read on the instant claims claiming a range of from zero to 3% and 10%.

8. Regarding claim 11, Aitken et al. disclose the addition of certain elements, as an example, Te (Tellerium) to modify the optical, thermal, and/or mechanical properties of the disclosed glasses ([0043]).

9. Regarding claim 20, with regards to being noncrystalline, Aitken et al. do not disclose any heat treatment or treatment, which would result in a crystalline form of the composition.

***Allowable Subject Matter***

10. Claims 12-14, 16-19, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art do not disclose a vitroceramic composition having a content of from 15-20mol% germanium, 10-15mol% antimony, 45-65 mol% sulfur, and 2-15mol% cesium halide or any of the compositions specified in claims 12-14, and 16-19. Even though the prior art may disclose some combinations of some of the components claimed in those claims, they do not disclose a vitroceramic glass having all those components in one composition. Moreover, the prior art do not disclose any crystal size for the claimed chalcogenide glass composition.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,392,376 to Aitken et al.

US Patent No. 4,973,645 to France

US Patent Application Publication No. 2003/0104918 to Aitken

US Patent No. 4,704,371 to Krolla et al.

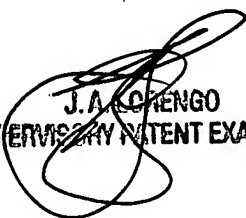
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1755

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

  
J.A. CHENGO  
SUPERVISORY PATENT EXAMINER